

**Abstract**

An automated synthesis apparatus for carrying out chemical reactions with reflux cooling  
5 comprising one or more reactor modules (2) each having one reactor (3), one or more feed  
vessels (4) each for a liquid reactant or reactant mixture and also one or more metering and  
feed devices (5) for the introduction of liquid reactant or reactant mixture from the feed  
vessel (the feed vessels) (4) into the reactor (3), wherein each reactor (3) has a lid (13)  
which is configured as a hollow body and encloses a hollow space (14), with an inlet line  
10 (15) and an outlet line (16) for a heat transfer medium into or out of the hollow space (14)  
and with one or more through-lines for introduction of each liquid reactant or reactant  
mixture into the reactor (3), is proposed.

(Figure 2)